

## ALUMINUM CARBOXYLATE DRAG REDUCERS FOR HYDROCARBON EMULSIONS

### Abstract of the Disclosure

Aluminum carboxylate drag reducing agents are described herein. These  
5 materials are useful to reduce drag in hydrocarbon fluids and multiphase fluids of  
hydrocarbon(s) and water. No injection probes or other special equipment is ex-  
pected to be required to introduce the drag reducing agent into the liquid stream.  
The drag reducing additives of the invention are not subject to shear degradation  
and do not cause undesirable changes in the emulsion or fluid quality of the fluid  
10 being treated, or undesirable foaming. In one non-limiting embodiment, an alumi-  
num monocarboxylate is reacted with at least one carboxylic acid *in situ*. In another  
non-limiting embodiment, the aluminum carboxylate is introduced as a dispersion in  
a solvent such as paraffin oil. The drag reducing additives include aluminum dicar-  
boxylates such as aluminum dioctoate, aluminum distearate, aluminum octoate-  
15 oleate, aluminum octoatetestearate, aluminum stearateoleate, hydroxyaluminum  
bis(2-ethylhexanoate) and mixtures thereof.